

WRM-10

Transformer Resistance Meter



Vanguard Instruments Company

Accurately



WRM-10™

Quick and Accurate Measurements

The WRM-10 accurately measures winding resistance of highly inductive power transformers. Dual resistance-reading-input channels allow the measurement of two winding resistances simultaneously. Four-wire (Kelvin) connections provide high accuracy and require no lead compensation. Utilizing a 36Vdc power supply capable of outputting up to 10 amperes; the WRM-10 provides stable resist-

ance readings of very large transformers. The resistance reading of a 100MVA transformer can be achieved in 3 minutes or less. The WRM-10 power supply is cooled by two heavy duty fans designed for continuous operation. Since the WRM-10 can accurately measure resistances ranging from 1 micro-ohm to 2,000 ohms, it can also be used to measure EHV circuit-breaker contact resistance, motor winding resistance, and other low resistance test application. A contact test mode checks "make before break" tap-switching sequences.

The WRM-10™ is supplied with three 50-foot cable sets. Each test cable lead is terminated with a "quick-disconnect" test clip. The WRM-10 power supply is thermally protected from overloaded damage.

Built-in Safety Features

To ensure the operator's safety, the WRM-10 automatically dissipates the energy stored in the transformer at the end of each test. This discharge circuit will continue to work even in if the WRM-10 supply voltage is lost.

User Interface

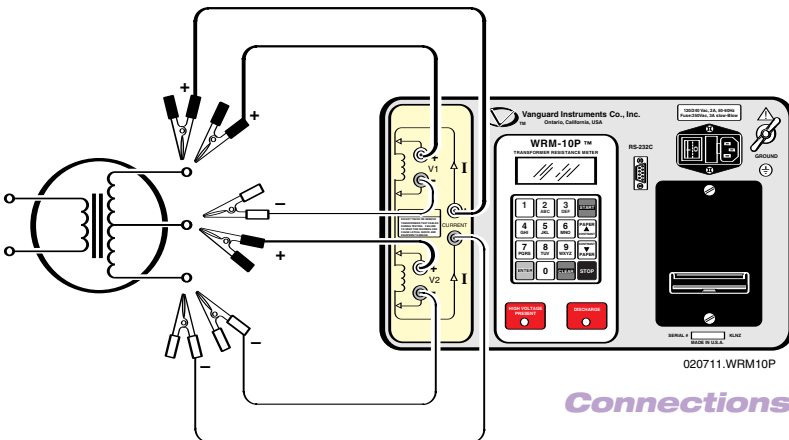
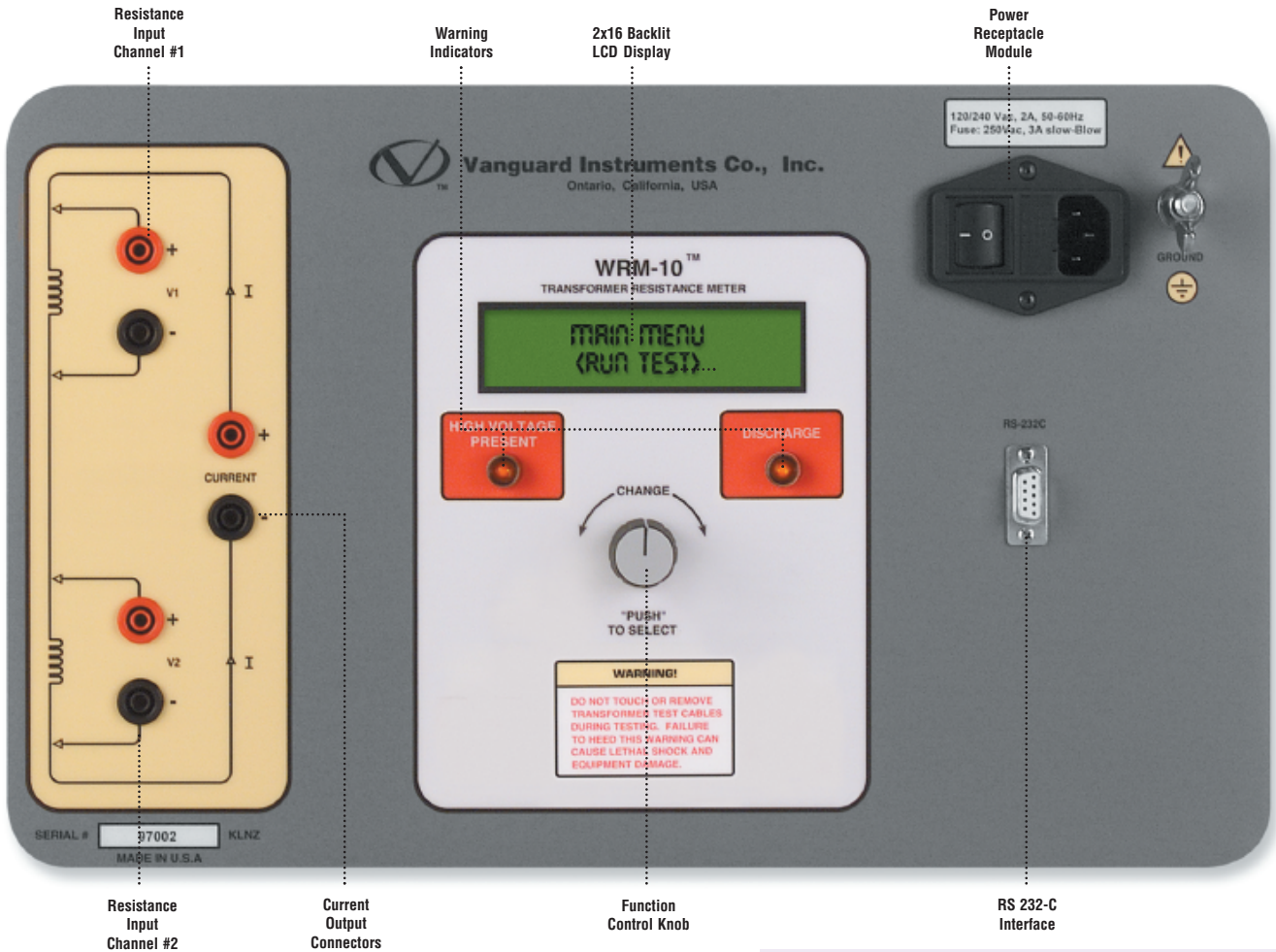
A single-knob user control (a turn-and-push selection) simplifies all WRM-10™ operating functions. Dual resistance readings are displayed on a 2-line by 16 character backlit LCD. An RS-232C serial interface port provides software upgrade capability and diagnostic testing.

SPECIFICATIONS

TYPE	Special purpose test equipment, portable transformer winding resistance meter
PHYSICAL SPECIFICATIONS	16.8" W by 12.6" H by 10.6" D (42.6 cm x 32.0 cm x 27 cm), Weight 27 lbs (12.2 kg)
INPUT POWER	90-130 Vac or 200-240 Vac (selectable), 50/60 Hz
RESISTANCE READING RANGE	1 micro-ohm to 2,000 ohms
ACCURACY	1 – 19,999 micro-ohm: ±0.5% reading, ±1 count, 20 – 999 milli-ohm: ±1% reading, ±1 count, 1 – 2,000 ohm: ±1.5% reading, ±1 count
TEST VOLTAGE	36 Vdc max
TEST CURRENT RANGE	Auto range, 10 Amperes max
DISPLAY	Backlit LCD, 2 lines by 16 characters
CONTROL	Single Knob Selector (turn-and-press selection)
COMPUTER INTERFACE	RS-232C port, 19,200 Baud (Factory Calibration and Diagnostic)
SAFETY	Designed to meet IEC61010 (1995), UL61010A-1, CSA-C22.2
ENVIRONMENT	Operating: -10°C to 50° C (15°F to +122° F); Storage: -30° C to 70° C (-22°F to +158° F)
CABLES	Three 50-ft test cables, ground cable, power cord and cable bag
OPTIONS	Shipping Case
WARRANTY	One Year Parts & Labor, Post Warranty Service Contract Available

Lightweight Winding Resistance

Measure Winding Resistances of Highly Inductive Power Transformers



- FEATURES**
- AUTO DISCHARGE CIRCUIT FOR OPERATOR SAFETY
 - AUTO CURRENT RANGING FROM 10 mA TO 10 AMPERES
 - DIGITAL RESISTANCE READING FROM 1 MICRO-OHM TO 2000 OHMS

Ordering Information

WRM-10™ Winding Resistance Meter

WRM-10™, Cable	Part No: WRM-10
WRM-10™ Shipping Case	Part No: WRM-10 Case
50-ft Test Cable	Part No: WRM Test Cable

Note: The above specifications are valid at nominal voltage and ambient temperature of +25°C (+77°F). Specifications are subject to change without notice.

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Reliability Through Instrumentation